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To seek, review, identify, and retrieve repository materials (slides, blocks, wet tissues, and information) of cases fulfilling the CDC definition of AIDS in the absence of demonstrable HIV infection. Identify cases for potential use in basic research on the chronology of HIV retroviral infection in human tissues.

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FOREWORD

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PI - Signature Date

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ATTACHMENTS

INTRODUCTION

The objective of this project is to seek, review, identify, and retrieve repository materials (slides, blocks, wet tissues, and information) of cases fulfilling the CDC definition of AIDS in the absence of demonstratable HIV infection. These cases could then be used in basic research of the chronology of HIV retroviral infection in human tissue. To meet this objective, the AFIP's master database in the mainframe computer was searched for cases accessioned before 1970 with any diagnosis indicative of immunodeficiency in the absence of proven HIV infection (MMWR, August 14, 1987/VOL. 36/No. 1S -- revised MMWR, 1992/41:1-19). Case selection criteria used: clinical, pathological, and demographic information available for correlation with pathological diagnoses, geographic origin, anatomic source, patient's age, and known risk factors demonstrated to influence the spread and distribution of HIV infection and AIDS.

BODY

Cases were transferred onto a floppy disk and imported into a custom-designed database for additional analysis at the Division of AIDS Pathology. Cases with adequate materials and sufficient clinical documentation were identified and retrieved for review at the AIDS Pathology Division. Records from cases accessioned before 1970 were reviewed manually for entry into the study database. Records on microfilm were scanned into digitized images and, when possible, translated into word processing files for conversion into other suitable formats for import into database records. We have developed and implemented a simplified and more practical approach to data retrieval from the AFIP mainframe computer for importation into personal computer workstations, thereby maximizing efficiency in reviewing and retrieving pathological material that is suitable for collaborative research in all aspects of pathology and basic science and potentially usable by other AFIP investigators.

The implementation phase, Phase I, was completed last year. This consisted of outlining the infrastructure requirements, technical support requirements, and purchasing hardware and software. Phase II, preliminary identification of possible AIDS cases using CDC criteria for identification in the absense of HIV testing is also complete. Phase III consists of making materials available for research and study, from the oldest cases in the Institute that have a high probability of being AIDS. The schema for meeting this goal is outlined in Attachment A. The current status of the search is shown in Attachment B. Materials available for PCR testing are listed in Attachment C.

CONCLUSIONS

Identifying possible AIDS related cases from among the Institute's oldest materials can be very useful. A systematic approach which narrows the scope of identification to those cases that are the most likely candidates is complete. Probable cases of AIDS were identified by this search and review. We are presently waiting for a decision to be made, in collaboration with the U.S. Army Retroviral Group, to determine the optimal use of the material. Possibilities include PCR and/or in situ testing for the presence of HIV viruses and viral sequencing. If this approach is approved, materials will be reaccessioned using a computer generated random identification technique. This will insure a double-blind protocol.

Search Schema

1. Some modification to the CDC criteria was made in order to further restrict the initial search to those cases most likely to actually be AIDS (e.g. Kaposi's sarcoma other than extremities).

2. Accession numbers for cases meeting the search criteria are identified.

3. Clinical and pathologic microfilm reports for the oldest cases are screened, and cases that have no relevance eliminated.

4. Pathology materials are requested for those remaining cases.

5. Materials are reviewed and irrelevant cases eliminated.

6. Materials are made available for further study.

STATUS BOARD					
CDC Criteria	Additional Criteria	Identified by Search	Microfilm Reviewed	Possible (pending slide review)	Possible (after slide review)
1. Candidiasis of the esophagus, trachea, bronchi, or lungs.	Age 14 to 60, or age unknown.	34	33	2	1
2. Cryptococoosis, extrapulmonary.	Age 14 to 60, or age unknown.	65	65	25	5
3. Cryptosporidiosis with diarrhea persisting more than one month.		0			
4. Cytomegalovirus disease of an organ other than liver, spleen, or lymph nodes in a patient older than one month of age.	Age 14 to 60, or age unknown.	37	35	6	4
5. Herpes simplex virus infection causing a mucocutaneous ulcer that persists more than one month, or bronchitis, pneumonitis, or esophagitis for any duration in a patient older than one month of age.		0			
6. Kaposi's sarcoma in a patient less than 60 years of age.	Age 14 to 60, or age unknown, other than extremities	15	12	0	0
7. Lymphoma of the brain (primary) in a patient less than 60 years of age.	Age 14 to 60, or age unknown.	17	15	4	4
8. Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia in a child less than 13 years of age.		0			
9. Mycobacterium avium complex or M. kansasii disease, disseminated (at a site other than lungs, skin, or cervical or hilar lymph nodes).		0			
10. Pneumocystis carinii pneumonia.	Age 14 to 60, or age unknown.	14	14	1	1
11. Progressive multifocal leukoencephalopathy.					
12. Toxoplasmosis of the brain in a patient older than one month of age.	Age 14 to 60, or age unknown.	9	8	0	0
	Totals:	191	182	38	15

Testable Materials Inventory

0334616	Blocks: 13 Brain 1 Lymph Node 1 Spleen Multiple other sites Tissue: 1 Brain (large piece)
0529995	Blocks: 4 Brain Slides: 90 Brain (unstained)
0606695	Blocks: 2 Brain Tissue: 1 Brain (large piece) Maybe Lung
0637496	Blocks: 2 Brain 1 Spleen Multiple Other
0917085	Blocks: 5 Spleen (small amount) 2 Tumor
0920825	Blocks: 9 Brain
0950771	Blocks: 7 Brain 3 Lymph Node Multiple Other
0980561	Blocks: 2 Brain 1 Lymph Node (minimal)
1124700	Blocks: 2 Lymph Node Multiple Other
1144385	Blocks: 5 Brain 1 Lymph Node 1 Spleen
1214412	Blocks: 3 Lymph Node
1235326	Blocks: 1 Lymph Node
1312716	Blocks: 9 Brain

Attachment C